

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

As a preliminary matter, Applicant notes the Office Action's acknowledgement of Applicant's claim for foreign priority under 35 U.S.C. § 119(a)-(d), receipt of all certified copies of the priority documents and consideration of the Information Disclosure Statement also filed on February 24, 2004.

Claims 1, 5, 6, 8 and 10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0066969 to Aihara. Claims 2, 3, 4, 7, 9 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Aihara in view of U.S. Patent Application Publication No. 2004/0114782 to Cho.

By this amendment, claims 1, 2, 5-7 and 9-11 have been amended to further define the subject matter Applicant regards as the invention as discussed in greater detail below. New claims 12-20 have been added to the application. Support for the subject matter recited in new claims 12-20 can at least be found on page 8, lines 4 and 5; page 8, line 22 through page 9, line 18; and page 10, lines 1-7 and 16-18 of the present specification. Claims 3, 4 and 8 remain unchanged in the application.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier. After amending the claims as set forth above, claims 1-20 are now pending in this application for consideration.

Applicant respectfully submits that each of the independent claims is patentably distinguishable over the cited references as required by § 102 and § 103. Applicant further submits that none of the cited references, whether considered alone or in combination, discloses Applicant's claimed image forming apparatus and method including the features, steps and arrangements of: (1) *determining a direction of a document data whether the document data direction is a vertical long or horizontally long*; (2) *determining a direction*

of a sheet contained in a cassette whether the sheet direction is a vertical long or horizontally long; and (3) rotating the stored image data at a specified angle when the document data direction disagrees with the sheet direction as required by independent claims 1, 2, 5-7 and 9-11. In addition, the cited references fail to disclose teach or suggest, *defining holding patterns* (claims 2, 5, 7, 9 and 11) and *searching image data* (claims 2 and 7). By contrast, the cited references fail to disclose, teach or suggest these claimed features, steps and arrangements. Accordingly, independent claims 1, 2, 5-7 and 9-11 and claims dependent therefrom are patentably distinguishable over the cited references. These distinctions will be further described below.

THE CLAIMS DISTINGUISH OVER THE CITED REFERENCES

Rejection Under 35 U.S.C. § 102

Claims 1, 5, 6, 8 and 10 stand rejected as being anticipated by Aihara. In response, Applicant traverses the rejection and respectfully submits that the claims are allowable at least for the reasons that follow.

Applicant relies on MPEP § 2131, entitled “Anticipation – Application of 35 U.S.C. 102(a), (b), and (e),” which states that a “claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Section 103 amplifies the meaning of this anticipation standard by pointing out that anticipation requires that the claimed subject matter must be “*identically* disclosed or described” by the prior art reference. (Emphasis added.) It is respectfully submitted that Aihara does not describe each and every element of any of the claims.

Embodiments of the present invention are directed to an image forming apparatus and method. The image forming method according to independent claim 6 includes the steps of storing data for every page and rotating the stored image data at a specified angle. The method also includes the steps of correcting pixels in the rotated image data of which positional relationship before and after the rotation has changed to come near the positional relationship before the rotation and forming an image on the sheet based on the corrected image data.

According to one embodiment of the present invention as recited in amended independent claim 6, the image forming method further includes the steps of: (1) ***determining a direction of a document data whether the document data direction is a vertical long or horizontally long***; (2) ***determining a direction of a sheet contained in a cassette whether the sheet direction is a vertical long or horizontally long***; and (3) ***rotating the stored image data at a specified angle when the document data direction disagrees with the sheet direction***.

Independent claims 7 and 9 are substantially similar in scope to independent claim 6 and includes the same patentable steps and arrangements. Independent claims 1, 2, 5, 10 and 11 are apparatus claims, directed to devices that practice the method of independent claim 6, including the same patentable features and arrangements. Support for the amendments to independent claims 1, 2, 5-7 and 9-11 can at least be found on page 8, lines 9-16 of the present specification. With these features, steps and arrangements, as an image is formed based on image data of which positional relationship is corrected, deterioration of image quality caused when an image is rotated can be suppressed and the image is maintained at a constant level (Specification, page 12, lines 3-7). Applicant respectfully submits that the Aihara reference fails to disclose these claimed features, steps and arrangements as well as the benefits provided.

The Aihara reference is directed to an image processing method suitable for image correction (Aihara, paragraph 3, lines 1-4). With respect to independent claims 1, 5 and 6, the Office Action at pages 2 and 3 equates the function Aihara's rotation unit 117 to the claimed step of rotating image data at a specified angle. With respect to independent claim 5, the Office at page 3 equates the function of Aihara's image output device 400 to the claimed step of forming an image on the sheet based on the correct image data and alleges that paragraph 82 of Aihara discloses the claimed first pattern hold means and image correction means of the present invention. Applicant respectfully disagrees.

Independent claims 1, 5 and 6 have been amended to recite that the image data is rotated at a specific angle ***when the document data direction disagrees with the sheet direction***. There is nothing in Aihara to disclose or suggest that its rotation unit is rotated when the document direction disagrees with the sheet direction. This is because Aihara also fails to disclose, teach or suggest (1) ***determining a direction of a document data whether***

the document data direction is a vertical long or horizontally long and (2) *determining a direction of a sheet contained in a cassette whether the sheet direction is a vertical long or horizontally long* as required by each of the independent claims. Aihara does not mention anything about the direction of the document data and the direction of the sheet in the cassette and making a comparison of the direction of the document data with the direction of the sheet to determine if image data needs to be rotated at a specific angle. Thus, for these reasons alone, Aihara fails to anticipate the subject matter of claims 1, 5, 6, 8 and 10.

Also, Applicant respectfully submits that paragraph 82 of Aihara fails to disclose the claimed first pattern hold means and image correction means. Paragraph 82 of Aihara merely discloses determining whether rotated coordinates of a contour of a specific region (or all pixels in a specific region) protrude from the image area of image information previous to the rotation. There is nothing in Aihara that discloses the techniques and steps of: (1) regarding pixels required for correction as rotation-subject pixels when the image rotation means rotates the image data, (2) holding first image pixel data that are corrected with respect to a matrix pixel array pattern including the rotation subject pixels as noteworthy pixels; (3) replacing the first image pixel data with noteworthy pixels of the image data that are in consistent with the first image pixel data when the image data stored in the page memory is rotated; and (4) replacing the second image pixel data with noteworthy pixels of the image data that are in consistent with the second image pixel data when the image data stored in the page memory is not rotated. There is absolutely no disclosure in Aihara of these steps and arrangements.

In addition, Applicant respectfully submits Aihara's output device 400 fails to qualify as the claimed image forming apparatus because Aihara's output device 400 fails to *form an image on the sheet based on the corrected image data*. As stated above, Aihara fails to disclose the claimed first pattern hold means and image correction means which corrects the image data. Therefore, Aihara's output device 400 cannot form an image based on the corrected image data as required by independent claim 5. For anticipation, however, "every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim." *Brown v. 3M*, 60 USPQ2d 1375 (Fed. Cir. 2001). Aihara fails to disclose each of the features, steps and arrangements of independent claims 1, 5, 6 and 10.

In view of the fact that the Aihara reference does not disclose each of the claimed features, steps and arrangements indicated above, this reference cannot be said to anticipate nor can it be said to render obvious the invention which is the subject matter of independent claims 1, 5, 6 and 10. Thus, independent claims 1, 5, 6 and 10 are allowable.

Because independent claims 1, 5, 6 and 10 are allowable, claims dependent therefrom, namely claim 8 as well as new claims 12, 13 and 19 are also allowable by virtue of their direct or indirect dependence from allowable independent claims 1, 5, 6 and 10 and for containing other patentable features. Further remarks regarding the asserted relationship between any of the claims and the cited reference are not necessary in view of their allowability. Applicant's silence as to the Office Action's comments is not indicative of being in acquiescence to the stated grounds of rejection.

The Rejections Under 35 U.S.C. § 103

In the Office Action, claims 2, 3, 4, 7, 9 and 11 stand rejected as being unpatentable over Aihara in view of Cho. Applicant respectfully traverses the rejections of these claims, and submits that these claims are allowable for at least the following reasons.

The framework for the objective analysis for determining obviousness under §103 requires:

1. Determining the scope and content of the prior art;
2. Ascertaining the differences between the claimed invention and the prior art;
3. Resolving the level of ordinary skill in the pertinent art; and
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Teleflex, Inc. v. KSR Int'l Co., 127 S. Ct. 1727, 82 USPQ2d 1385 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). In order to establish a *prima facie* case of obviousness, all the claim limitations must be taught or suggested by the prior art. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). See MPEP §2143.03.

Missing Recitations from the Prior Art

Embodiments of the present invention are directed to an image forming apparatus and method. The image forming method according to independent claim 7 includes the steps of regarding pixels requiring correction as replacing subject pixels when image data is rotated at a specified angle and holding the image data after correcting a matrix pixel array pattern including the replacing subject pixels as noteworthy pixels. The method also includes the steps of storing image data for every page and searching image data in accord with the matrix pixel array pattern held out of rotary processed image data. The method further includes the steps of correcting by replacing subject pixels with the pixel array pattern when the image data in accord with the pixel array pattern is detected and forming an image on the sheet based on the corrected image data.

According to one embodiment of the present invention as recited in amended independent claim 7, the image forming method further includes the steps of: (1) ***determining a direction of a document data whether the document data direction is a vertical long or horizontally long***; (2) ***determining a direction of a sheet contained in a cassette whether the sheet direction is a vertical long or horizontally long***; and (3) ***rotating the stored image data at a specified angle when the document data direction disagrees with the sheet direction***. Independent claims 2, 7, 9 and 11 address similar issues.

The Office Action states on page 6, that the primary reference of Aihara discloses each of the claimed steps except for searching image data. The Office Action then relies on the Cho reference to cure this deficiency. Applicant respectfully submits that even assuming arguendo that Cho discloses the claimed search step, Cho fails to disclose, teach or suggest the claimed steps and arrangements identified above and was not cited for that purpose.

In view of the fact that the cited references, whether considered alone or in combination do not disclose the claimed features, step and arrangements indicated above, these references cannot be said to render obvious the invention which is the subject matter of independent claims 2, 7, 9 and 11. Thus, independent claims 2, 7, 9 and 11 are allowable.

Because independent claims 2, 7, 9 and 11 are allowable, claims dependent therefrom, namely claims 3 and 4, as well as new claims 14-18 and 20 are also allowable by virtue of their direct or indirect dependence from allowable independent claims 2, 7, 9 and 11 and for

containing other patentable features. Further remarks regarding the asserted relationship between any of the claims and the cited references are not necessary in view of their allowability. Applicant's silence as to the Office Action's comments is not indicative of being in acquiescence to the stated grounds of rejection.

The Level of Ordinary Skill In the Art has Incorrectly Been Ascertained

KSR did not repeal the *Graham v. John Deere Co.* factors - just the opposite, it reaffirmed them. One of those factors is the requirement that the PTO must resolve the level of ordinary skill in the pertinent art. It is respectfully submitted that the PTO presumes a higher level of skill of the ordinary artisan in this art than was actually present at the time of the invention.

The ordinary artisan would not have had a level of skill sufficient to render the invention obvious to that ordinary artisan. Specifically, before the disclosure of the present invention, the ordinary artisan would not have had the skill to predict that the features of Aihara could be modified in accordance with Cho as is asserted in the Office Action. To the contrary, only the innovator would have had the skill necessary to predict such modification. The ordinary artisan would not have had the skills to arrive at the present invention without instruction from the innovator. The Office Action is silent in regard to addressing the requisite *Graham* factors.

Lack of Sufficiently Articulated Rationale to Modify or Combine the References

The Office Action fails to meet the requirement of providing a sufficiently articulated rationale to combine Aihara and Cho.

The Supreme Court in *KSR* stated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the art...it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR* at 1741. In addition, the Court in *KSR* stated that a reason to combine

elements should be made explicit. *Id.* at 1740-41.¹ Indeed, the Court approvingly cited *In re Kahn*, 441 F.3d 977 (Fed. Cir. 2006), for requiring an articulated reason. *Id.* at 1741.²

Aihara is devoid of any reason why one of skill in the art would incorporate the teachings of Cho into Aihara. The Office Action states that it would have been obvious to combine Cho into Aihara because doing so would “yield an efficient and accurate image processing apparatus.” Thus, the proffered motivation, even assuming that the underlying results do in fact occur from general implementation of the teachings of Cho does not mean that the ordinary artisan would have combined the references. Instead, the Office Action all but relies on Applicant’s disclosure for motivation to modify the references to arrive at the claimed invention, the Office Action citing nothing in the prior art that provides the specific motivation to modify the references to arrive at the invention as claimed.

Thus, the PTO has not properly articulated a reason for why one with ordinary skill in the art would combine the teachings of Aihara with Cho. Because the PTO has not provided sufficient reasons to combine the teachings of Aihara with Cho, any rejections based on these combinations are improper. Accordingly, the present claims are not rendered unpatentable over the prior art.

Applicant respectfully submits that independent claims 2, 7, 9 and 11 and claims dependent therefrom are patentably distinguishable over the cited references and thus, allowable. Further remarks regarding the asserted relationship between any of the claims and the cited references are not necessary in view of their allowability. Applicant’s silence as to the Office Action’s comments is not indicative of being in acquiescence to the stated grounds of rejection.

¹ “Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.” *Id.* at 1740-41.

² “Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” *Id.* at 1741.

CONCLUSION

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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